

Amendments to the Specification

Please replace page 22, lines 14 to 17 with:

Figure 8c shows elongated epiretinal electrodes (820817). The electrically conducting electrodes (820817) are contained within the electrical insulation material (818); a silicon chip (819) acts as a substrate. The electrode insulator device (818) is shaped so as to contact the retina (814) in a conformal manner.

Please replace page 23, line 28 to page 24, line 3 with:

Another aspect of an embodiment of the invention is the elongated electrode, which are designed to stimulate deeper retinal cells, in one embodiment, by penetrating the retina. By getting closer to the target cells for stimulation, the current required for stimulation is lower and the focus of the stimulation is more localized. The lengths chosen are 100 microns through 500 microns, including 300 microns. Figure 8c is a rendering of an elongated epiretinal electrode array with the electrodes shown as pointed electrical conductors (820817), embedded in an electrical insulator (818), where the elongated electrodes (81817) contact the retina in a conformal manner, however, penetrating into the retina (814).

Please replace page 28, line 31 to page 29, line 5 with:

In one embodiment (Figure 16a), the internal-to-the-eye implanted part consists of two subsystems, the electrode component 1602, including electrodes 1603, subretinally positioned and the electronic component 1601 epiretinally positioned and connected by cables 1604. The electronics component 1601, with its relatively high heat dissipation, is positioned at a distance, within the eye, from the electrode component 1602 placed near the retina 1605 that is sensitive to heat.

An alternative embodiment shown in Figure 16b is where one of the combined electronic and electrode substrate units 1611 is positioned subretinally and the other is located epiretinally 1610 and both are held together across the retina so as to efficiently stimulate bipolar and associated cells in the retina 1605.